

# TestAmerica

THE LEADER IN ENVIRONMENTAL TESTING

## ANALYTICAL REPORT

TestAmerica Laboratories, Inc.

TestAmerica Canton

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North Canton, OH 44720

Tel: (330)497-9396

TestAmerica Job ID: 240-45751-1

Client Project/Site: EMD

For:

TRC Environmental Corp-Payne Firm

11231 Cornell Park Drive

Cincinnati, Ohio 45242

Attn: Jim Wasserbauer



Authorized for release by:

12/30/2014 4:24:30 PM

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*This report has been electronically signed and authorized by the signatory. Electronic signature is intended to be the legally binding equivalent of a traditionally handwritten signature.*

*Results relate only to the items tested and the sample(s) as received by the laboratory.*

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## Definitions/Glossary

Client: TRC Environmental Corp-Payne Firm  
Project/Site: EMD

TestAmerica Job ID: 240-45751-1

### Qualifiers

#### GC/MS VOA

Qualifier	Qualifier Description
J	Result is less than the RL but greater than or equal to the MDL and the concentration is an approximate value.
*	LCS or LCSD exceeds the control limits

### Glossary

Abbreviation	These commonly used abbreviations may or may not be present in this report.
□	Listed under the "D" column to designate that the result is reported on a dry weight basis
%R	Percent Recovery
CFL	Contains Free Liquid
CNF	Contains no Free Liquid
DER	Duplicate error ratio (normalized absolute difference)
Dil Fac	Dilution Factor
DL, RA, RE, IN	Indicates a Dilution, Re-analysis, Re-extraction, or additional Initial metals/anion analysis of the sample
DLC	Decision level concentration
MDA	Minimum detectable activity
EDL	Estimated Detection Limit
MDC	Minimum detectable concentration
MDL	Method Detection Limit
ML	Minimum Level (Dioxin)
NC	Not Calculated
ND	Not detected at the reporting limit (or MDL or EDL if shown)
PQL	Practical Quantitation Limit
QC	Quality Control
RER	Relative error ratio
RL	Reporting Limit or Requested Limit (Radiochemistry)
RPD	Relative Percent Difference, a measure of the relative difference between two points
TEF	Toxicity Equivalent Factor (Dioxin)
TEQ	Toxicity Equivalent Quotient (Dioxin)

# Case Narrative

Client: TRC Environmental Corp-Payne Firm  
Project/Site: EMD

TestAmerica Job ID: 240-45751-1

**Job ID: 240-45751-1**

**Laboratory: TestAmerica Canton**

**Narrative**

## CASE NARRATIVE

**Client: TRC Environmental Corp-Payne Firm**

**Project: EMD**

**Report Number: 240-45751-1**

With the exceptions noted as flags or footnotes, standard analytical protocols were followed in the analysis of the samples and no problems were encountered or anomalies observed. In addition all laboratory quality control samples were within established control limits, with any exceptions noted below. Each sample was analyzed to achieve the lowest possible reporting limit within the constraints of the method. In some cases, due to interference or analytes present at high concentrations, samples were diluted. For diluted samples, the reporting limits are adjusted relative to the dilution required.

TestAmerica Canton attests to the validity of the laboratory data generated by TestAmerica facilities reported herein. All analyses performed by TestAmerica facilities were done using established laboratory SOPs that incorporate QA/QC procedures described in the application methods. TestAmerica's operations groups have reviewed the data for compliance with the laboratory QA/QC plan, and data have been found to be compliant with laboratory protocols unless otherwise noted below.

The test results in this report meet all NELAP requirements for parameters for which accreditation is required or available. Any exceptions to NELAP requirements are noted in this report. Pursuant to NELAP, this report may not be reproduced, except in full, without the written approval of the laboratory.

Calculations are performed before rounding to avoid round-off errors in calculated results.

All holding times were met and proper preservation noted for the methods performed on these samples, unless otherwise detailed in the individual sections below.

This laboratory report is confidential and is intended for the sole use of TestAmerica and its client.

### **RECEIPT**

The samples were received on 12/19/2014 8:40 AM; the samples arrived in good condition, properly preserved and, where required, on ice. The temperature of the cooler at receipt was 1.7° C.

### **VOLATILE ORGANIC COMPOUNDS (GCMS)**

Samples EFFLUENT/121814 (240-45751-1) and TB01/121814 (240-45751-2) were analyzed for volatile organic compounds (GCMS) in accordance with EPA SW-846 Method 8260B. The samples were analyzed on 12/29/2014 and 12/30/2014.

The laboratory control sample (LCS) for batch 162734 recovered outside control limits for 1,1,1-Trichloroethane, Bromodichloromethane and cis-1,3-Dichloropropene. These analytes were biased high in the LCS and were not detected in the associated samples; therefore, the data have been reported.

Sample EFFLUENT/121814 (240-45751-1)[2.5X] required dilution prior to analysis. The reporting limits have been adjusted accordingly.

No additional analytical or quality issues were noted, other than those described above or in the Definitions/Glossary page.

# Method Summary

Client: TRC Environmental Corp-Payne Firm  
Project/Site: EMD

TestAmerica Job ID: 240-45751-1

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Method	Method Description	Protocol	Laboratory
8260B	Volatile Organic Compounds (GC/MS)	SW846	TAL CAN

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**Protocol References:**

SW846 = "Test Methods For Evaluating Solid Waste, Physical/Chemical Methods", Third Edition, November 1986 And Its Updates.

**Laboratory References:**

TAL CAN = TestAmerica Canton, 4101 Shuffel Street NW, North Canton, OH 44720, TEL (330)497-9396

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# Sample Summary

Client: TRC Environmental Corp-Payne Firm  
Project/Site: EMD

TestAmerica Job ID: 240-45751-1

Lab Sample ID	Client Sample ID	Matrix	Collected	Received
240-45751-1	EFFLUENT/121814	Water	12/18/14 15:00	12/19/14 08:40
240-45751-2	TB01/121814	Water	12/18/14 00:00	12/19/14 08:40

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# Detection Summary

Client: TRC Environmental Corp-Payne Firm  
Project/Site: EMD

TestAmerica Job ID: 240-45751-1

**Client Sample ID: EFFLUENT/121814**

**Lab Sample ID: 240-45751-1**

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Acetone	34		25	8.6	ug/L	2.5		8260B	Total/NA
Benzene	3.5		2.5	0.60	ug/L	2.5		8260B	Total/NA
Bromoform	3.6		2.5	1.4	ug/L	2.5		8260B	Total/NA
Carbon tetrachloride	0.53	J	2.5	0.43	ug/L	2.5		8260B	Total/NA
Chloroform	25		2.5	0.53	ug/L	2.5		8260B	Total/NA
Chloromethane	1.3	J	2.5	1.1	ug/L	2.5		8260B	Total/NA
1,1-Dichloroethane	37		2.5	0.65	ug/L	2.5		8260B	Total/NA
1,2-Dichloroethane	72		2.5	0.50	ug/L	2.5		8260B	Total/NA
1,4-Dioxane	270		130	100	ug/L	2.5		8260B	Total/NA
1,1,2,2-Tetrachloroethane	6.3		2.5	0.55	ug/L	2.5		8260B	Total/NA
Tetrachloroethene	0.60	J	2.5	0.50	ug/L	2.5		8260B	Total/NA
1,1,1-Trichloroethane	6.6		2.5	0.55	ug/L	2.5		8260B	Total/NA
1,1,2-Trichloroethane	2.3	J	2.5	0.43	ug/L	2.5		8260B	Total/NA

**Client Sample ID: TB01/121814**

**Lab Sample ID: 240-45751-2**

No Detections.

This Detection Summary does not include radiochemical test results.

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# Client Sample Results

Client: TRC Environmental Corp-Payne Firm  
Project/Site: EMD

TestAmerica Job ID: 240-45751-1

**Client Sample ID: EFFLUENT/121814**

**Lab Sample ID: 240-45751-1**

**Date Collected: 12/18/14 15:00**

**Matrix: Water**

**Date Received: 12/19/14 08:40**

**Method: 8260B - Volatile Organic Compounds (GC/MS)**

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
<b>Acetone</b>	<b>34</b>		25	8.6	ug/L			12/30/14 13:09	2.5
Acetonitrile	ND		50	23	ug/L			12/30/14 13:09	2.5
Acrolein	ND		50	3.6	ug/L			12/30/14 13:09	2.5
Acrylonitrile	ND		50	16	ug/L			12/30/14 13:09	2.5
<b>Benzene</b>	<b>3.5</b>		2.5	0.60	ug/L			12/30/14 13:09	2.5
Bromodichloromethane	ND		2.5	0.38	ug/L			12/30/14 13:09	2.5
<b>Bromoform</b>	<b>3.6</b>		2.5	1.4	ug/L			12/30/14 13:09	2.5
Bromomethane	ND		2.5	1.6	ug/L			12/30/14 13:09	2.5
2-Butanone	ND		25	10	ug/L			12/30/14 13:09	2.5
Carbon disulfide	ND		2.5	0.70	ug/L			12/30/14 13:09	2.5
<b>Carbon tetrachloride</b>	<b>0.53</b>	<b>J</b>	2.5	0.43	ug/L			12/30/14 13:09	2.5
Chlorobenzene	ND		2.5	0.48	ug/L			12/30/14 13:09	2.5
Chloroethane	ND		2.5	0.83	ug/L			12/30/14 13:09	2.5
<b>Chloroform</b>	<b>25</b>		2.5	0.53	ug/L			12/30/14 13:09	2.5
<b>Chloromethane</b>	<b>1.3</b>	<b>J</b>	2.5	1.1	ug/L			12/30/14 13:09	2.5
Chloroprene	ND		5.0	0.65	ug/L			12/30/14 13:09	2.5
3-Chloro-1-propene	ND		5.0	2.1	ug/L			12/30/14 13:09	2.5
cis-1,2-Dichloroethene	ND		2.5	0.50	ug/L			12/30/14 13:09	2.5
cis-1,3-Dichloropropene	ND		2.5	1.2	ug/L			12/30/14 13:09	2.5
Dibromochloromethane	ND		2.5	1.1	ug/L			12/30/14 13:09	2.5
1,2-Dibromo-3-Chloropropane	ND		5.0	2.1	ug/L			12/30/14 13:09	2.5
Dibromomethane	ND		2.5	0.43	ug/L			12/30/14 13:09	2.5
Dichlorodifluoromethane	ND		2.5	1.3	ug/L			12/30/14 13:09	2.5
<b>1,1-Dichloroethane</b>	<b>37</b>		2.5	0.65	ug/L			12/30/14 13:09	2.5
<b>1,2-Dichloroethane</b>	<b>72</b>		2.5	0.50	ug/L			12/30/14 13:09	2.5
1,1-Dichloroethene	ND		2.5	1.1	ug/L			12/30/14 13:09	2.5
1,2-Dichloroethene, Total	ND		5.0	0.50	ug/L			12/30/14 13:09	2.5
1,2-Dichloropropane	ND		2.5	0.55	ug/L			12/30/14 13:09	2.5
<b>1,4-Dioxane</b>	<b>270</b>		130	100	ug/L			12/30/14 13:09	2.5
Ethylbenzene	ND		2.5	0.58	ug/L			12/30/14 13:09	2.5
Ethylene Dibromide	ND		2.5	0.48	ug/L			12/30/14 13:09	2.5
Ethyl methacrylate	ND		2.5	1.1	ug/L			12/30/14 13:09	2.5
2-Hexanone	ND		25	9.7	ug/L			12/30/14 13:09	2.5
Iodomethane	ND		2.5	1.1	ug/L			12/30/14 13:09	2.5
Isobutanol	ND		130	29	ug/L			12/30/14 13:09	2.5
Methacrylonitrile	ND		5.0	1.8	ug/L			12/30/14 13:09	2.5
Methylene Chloride	ND		2.5	0.70	ug/L			12/30/14 13:09	2.5
Methyl methacrylate	ND		5.0	2.5	ug/L			12/30/14 13:09	2.5
4-Methyl-2-pentanone (MIBK)	ND		25	9.0	ug/L			12/30/14 13:09	2.5
Propionitrile	ND		10	2.4	ug/L			12/30/14 13:09	2.5
Styrene	ND		2.5	1.1	ug/L			12/30/14 13:09	2.5
1,1,1,2-Tetrachloroethane	ND		2.5	0.70	ug/L			12/30/14 13:09	2.5
<b>1,1,2,2-Tetrachloroethane</b>	<b>6.3</b>		2.5	0.55	ug/L			12/30/14 13:09	2.5
<b>Tetrachloroethene</b>	<b>0.60</b>	<b>J</b>	2.5	0.50	ug/L			12/30/14 13:09	2.5
Toluene	ND		2.5	0.55	ug/L			12/30/14 13:09	2.5
trans-1,4-Dichloro-2-butene	ND		2.5	0.78	ug/L			12/30/14 13:09	2.5
trans-1,2-Dichloroethene	ND		2.5	0.65	ug/L			12/30/14 13:09	2.5
trans-1,3-Dichloropropene	ND		2.5	1.4	ug/L			12/30/14 13:09	2.5
<b>1,1,1-Trichloroethane</b>	<b>6.6</b>		2.5	0.55	ug/L			12/30/14 13:09	2.5

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# Client Sample Results

Client: TRC Environmental Corp-Payne Firm  
Project/Site: EMD

TestAmerica Job ID: 240-45751-1

**Client Sample ID: EFFLUENT/121814**

**Lab Sample ID: 240-45751-1**

**Date Collected: 12/18/14 15:00**

**Matrix: Water**

**Date Received: 12/19/14 08:40**

**Method: 8260B - Volatile Organic Compounds (GC/MS) (Continued)**

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
<b>1,1,2-Trichloroethane</b>	<b>2.3</b>	<b>J</b>	2.5	0.43	ug/L			12/30/14 13:09	2.5
Trichloroethene	ND		2.5	0.38	ug/L			12/30/14 13:09	2.5
Trichlorofluoromethane	ND		2.5	1.2	ug/L			12/30/14 13:09	2.5
1,2,3-Trichloropropane	ND		2.5	0.75	ug/L			12/30/14 13:09	2.5
Vinyl acetate	ND		5.0	1.0	ug/L			12/30/14 13:09	2.5
Vinyl chloride	ND		2.5	0.73	ug/L			12/30/14 13:09	2.5
Xylenes, Total	ND		5.0	1.1	ug/L			12/30/14 13:09	2.5

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	87		66 - 120		12/30/14 13:09	2.5
Dibromofluoromethane (Surr)	94		75 - 121		12/30/14 13:09	2.5
1,2-Dichloroethane-d4 (Surr)	98		63 - 129		12/30/14 13:09	2.5
Toluene-d8 (Surr)	94		74 - 120		12/30/14 13:09	2.5

# Client Sample Results

Client: TRC Environmental Corp-Payne Firm  
Project/Site: EMD

TestAmerica Job ID: 240-45751-1

**Client Sample ID: TB01/121814**

**Lab Sample ID: 240-45751-2**

**Date Collected: 12/18/14 00:00**

**Matrix: Water**

**Date Received: 12/19/14 08:40**

**Method: 8260B - Volatile Organic Compounds (GC/MS)**

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Acetone	ND		10	3.4	ug/L			12/29/14 20:48	1
Acetonitrile	ND		20	9.2	ug/L			12/29/14 20:48	1
Acrolein	ND		20	1.4	ug/L			12/29/14 20:48	1
Acrylonitrile	ND		20	6.3	ug/L			12/29/14 20:48	1
Benzene	ND		1.0	0.24	ug/L			12/29/14 20:48	1
Bromodichloromethane	ND	*	1.0	0.15	ug/L			12/29/14 20:48	1
Bromoform	ND		1.0	0.56	ug/L			12/29/14 20:48	1
Bromomethane	ND		1.0	0.63	ug/L			12/29/14 20:48	1
2-Butanone	ND		10	4.1	ug/L			12/29/14 20:48	1
Carbon disulfide	ND		1.0	0.28	ug/L			12/29/14 20:48	1
Carbon tetrachloride	ND		1.0	0.17	ug/L			12/29/14 20:48	1
Chlorobenzene	ND		1.0	0.19	ug/L			12/29/14 20:48	1
Chloroethane	ND		1.0	0.33	ug/L			12/29/14 20:48	1
Chloroform	ND		1.0	0.21	ug/L			12/29/14 20:48	1
Chloromethane	ND		1.0	0.44	ug/L			12/29/14 20:48	1
Chloroprene	ND		2.0	0.26	ug/L			12/29/14 20:48	1
3-Chloro-1-propene	ND		2.0	0.84	ug/L			12/29/14 20:48	1
cis-1,2-Dichloroethene	ND		1.0	0.20	ug/L			12/29/14 20:48	1
cis-1,3-Dichloropropene	ND	*	1.0	0.46	ug/L			12/29/14 20:48	1
Dibromochloromethane	ND		1.0	0.43	ug/L			12/29/14 20:48	1
1,2-Dibromo-3-Chloropropane	ND		2.0	0.82	ug/L			12/29/14 20:48	1
Dibromomethane	ND		1.0	0.17	ug/L			12/29/14 20:48	1
Dichlorodifluoromethane	ND		1.0	0.50	ug/L			12/29/14 20:48	1
1,1-Dichloroethane	ND		1.0	0.26	ug/L			12/29/14 20:48	1
1,2-Dichloroethane	ND		1.0	0.20	ug/L			12/29/14 20:48	1
1,1-Dichloroethene	ND		1.0	0.45	ug/L			12/29/14 20:48	1
1,2-Dichloroethene, Total	ND		2.0	0.20	ug/L			12/29/14 20:48	1
1,2-Dichloropropane	ND		1.0	0.22	ug/L			12/29/14 20:48	1
1,4-Dioxane	ND		50	40	ug/L			12/29/14 20:48	1
Ethylbenzene	ND		1.0	0.23	ug/L			12/29/14 20:48	1
Ethylene Dibromide	ND		1.0	0.19	ug/L			12/29/14 20:48	1
Ethyl methacrylate	ND		1.0	0.44	ug/L			12/29/14 20:48	1
2-Hexanone	ND		10	3.9	ug/L			12/29/14 20:48	1
Iodomethane	ND		1.0	0.42	ug/L			12/29/14 20:48	1
Isobutanol	ND		50	12	ug/L			12/29/14 20:48	1
Methacrylonitrile	ND		2.0	0.70	ug/L			12/29/14 20:48	1
Methylene Chloride	ND		1.0	0.28	ug/L			12/29/14 20:48	1
Methyl methacrylate	ND		2.0	0.99	ug/L			12/29/14 20:48	1
4-Methyl-2-pentanone (MIBK)	ND		10	3.6	ug/L			12/29/14 20:48	1
Propionitrile	ND		4.0	0.95	ug/L			12/29/14 20:48	1
Styrene	ND		1.0	0.45	ug/L			12/29/14 20:48	1
1,1,1,2-Tetrachloroethane	ND		1.0	0.28	ug/L			12/29/14 20:48	1
1,1,2,2-Tetrachloroethane	ND		1.0	0.22	ug/L			12/29/14 20:48	1
Tetrachloroethene	ND		1.0	0.20	ug/L			12/29/14 20:48	1
Toluene	ND		1.0	0.22	ug/L			12/29/14 20:48	1
trans-1,4-Dichloro-2-butene	ND		1.0	0.31	ug/L			12/29/14 20:48	1
trans-1,2-Dichloroethene	ND		1.0	0.26	ug/L			12/29/14 20:48	1
trans-1,3-Dichloropropene	ND		1.0	0.56	ug/L			12/29/14 20:48	1
1,1,1-Trichloroethane	ND	*	1.0	0.22	ug/L			12/29/14 20:48	1

TestAmerica Canton

# Client Sample Results

Client: TRC Environmental Corp-Payne Firm  
 Project/Site: EMD

TestAmerica Job ID: 240-45751-1

**Client Sample ID: TB01/121814**

**Lab Sample ID: 240-45751-2**

**Date Collected: 12/18/14 00:00**

**Matrix: Water**

**Date Received: 12/19/14 08:40**

**Method: 8260B - Volatile Organic Compounds (GC/MS) (Continued)**

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,1,2-Trichloroethane	ND		1.0	0.17	ug/L			12/29/14 20:48	1
Trichloroethene	ND		1.0	0.15	ug/L			12/29/14 20:48	1
Trichlorofluoromethane	ND		1.0	0.49	ug/L			12/29/14 20:48	1
1,2,3-Trichloropropane	ND		1.0	0.30	ug/L			12/29/14 20:48	1
Vinyl acetate	ND		2.0	0.41	ug/L			12/29/14 20:48	1
Vinyl chloride	ND		1.0	0.29	ug/L			12/29/14 20:48	1
Xylenes, Total	ND		2.0	0.43	ug/L			12/29/14 20:48	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	89		66 - 120		12/29/14 20:48	1
Dibromofluoromethane (Surr)	102		75 - 121		12/29/14 20:48	1
1,2-Dichloroethane-d4 (Surr)	106		63 - 129		12/29/14 20:48	1
Toluene-d8 (Surr)	89		74 - 120		12/29/14 20:48	1

# Surrogate Summary

Client: TRC Environmental Corp-Payne Firm  
Project/Site: EMD

TestAmerica Job ID: 240-45751-1

## Method: 8260B - Volatile Organic Compounds (GC/MS)

Matrix: Water

Prep Type: Total/NA

### Percent Surrogate Recovery (Acceptance Limits)

Lab Sample ID	Client Sample ID	BFB	DBFM	12DCE	TOL
		(66-120)	(75-121)	(63-129)	(74-120)
240-45751-1	EFFLUENT/121814	87	94	98	94
240-45751-2	TB01/121814	89	102	106	89
LCS 240-162734/4	Lab Control Sample	108	117	116	107
LCS 240-162825/5	Lab Control Sample	90	91	95	97
MB 240-162734/6	Method Blank	95	114	110	99
MB 240-162825/7	Method Blank	89	89	99	94

### Surrogate Legend

BFB = 4-Bromofluorobenzene (Surr)

DBFM = Dibromofluoromethane (Surr)

12DCE = 1,2-Dichloroethane-d4 (Surr)

TOL = Toluene-d8 (Surr)

# QC Sample Results

Client: TRC Environmental Corp-Payne Firm  
Project/Site: EMD

TestAmerica Job ID: 240-45751-1

## Method: 8260B - Volatile Organic Compounds (GC/MS)

**Lab Sample ID: MB 240-162734/6**

**Matrix: Water**

**Analysis Batch: 162734**

**Client Sample ID: Method Blank**

**Prep Type: Total/NA**

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Acetone	ND		10	3.4	ug/L			12/29/14 15:35	1
Acetonitrile	ND		20	9.2	ug/L			12/29/14 15:35	1
Acrolein	ND		20	1.4	ug/L			12/29/14 15:35	1
Acrylonitrile	ND		20	6.3	ug/L			12/29/14 15:35	1
Benzene	ND		1.0	0.24	ug/L			12/29/14 15:35	1
Bromodichloromethane	ND		1.0	0.15	ug/L			12/29/14 15:35	1
Bromoform	ND		1.0	0.56	ug/L			12/29/14 15:35	1
Bromomethane	ND		1.0	0.63	ug/L			12/29/14 15:35	1
2-Butanone	ND		10	4.1	ug/L			12/29/14 15:35	1
Carbon disulfide	ND		1.0	0.28	ug/L			12/29/14 15:35	1
Carbon tetrachloride	ND		1.0	0.17	ug/L			12/29/14 15:35	1
Chlorobenzene	ND		1.0	0.19	ug/L			12/29/14 15:35	1
Chloroethane	ND		1.0	0.33	ug/L			12/29/14 15:35	1
Chloroform	ND		1.0	0.21	ug/L			12/29/14 15:35	1
Chloromethane	ND		1.0	0.44	ug/L			12/29/14 15:35	1
Chloroprene	ND		2.0	0.26	ug/L			12/29/14 15:35	1
3-Chloro-1-propene	ND		2.0	0.84	ug/L			12/29/14 15:35	1
cis-1,2-Dichloroethene	ND		1.0	0.20	ug/L			12/29/14 15:35	1
cis-1,3-Dichloropropene	ND		1.0	0.46	ug/L			12/29/14 15:35	1
Dibromochloromethane	ND		1.0	0.43	ug/L			12/29/14 15:35	1
1,2-Dibromo-3-Chloropropane	ND		2.0	0.82	ug/L			12/29/14 15:35	1
Dibromomethane	ND		1.0	0.17	ug/L			12/29/14 15:35	1
Dichlorodifluoromethane	ND		1.0	0.50	ug/L			12/29/14 15:35	1
1,1-Dichloroethane	ND		1.0	0.26	ug/L			12/29/14 15:35	1
1,2-Dichloroethane	ND		1.0	0.20	ug/L			12/29/14 15:35	1
1,1-Dichloroethene	ND		1.0	0.45	ug/L			12/29/14 15:35	1
1,2-Dichloroethene, Total	ND		2.0	0.20	ug/L			12/29/14 15:35	1
1,2-Dichloropropane	ND		1.0	0.22	ug/L			12/29/14 15:35	1
1,4-Dioxane	ND		50	40	ug/L			12/29/14 15:35	1
Ethylbenzene	ND		1.0	0.23	ug/L			12/29/14 15:35	1
Ethylene Dibromide	ND		1.0	0.19	ug/L			12/29/14 15:35	1
Ethyl methacrylate	ND		1.0	0.44	ug/L			12/29/14 15:35	1
2-Hexanone	ND		10	3.9	ug/L			12/29/14 15:35	1
Iodomethane	ND		1.0	0.42	ug/L			12/29/14 15:35	1
Isobutanol	ND		50	12	ug/L			12/29/14 15:35	1
Methacrylonitrile	ND		2.0	0.70	ug/L			12/29/14 15:35	1
Methylene Chloride	ND		1.0	0.28	ug/L			12/29/14 15:35	1
Methyl methacrylate	ND		2.0	0.99	ug/L			12/29/14 15:35	1
4-Methyl-2-pentanone (MIBK)	ND		10	3.6	ug/L			12/29/14 15:35	1
Propionitrile	ND		4.0	0.95	ug/L			12/29/14 15:35	1
Styrene	ND		1.0	0.45	ug/L			12/29/14 15:35	1
1,1,1,2-Tetrachloroethane	ND		1.0	0.28	ug/L			12/29/14 15:35	1
1,1,2,2-Tetrachloroethane	ND		1.0	0.22	ug/L			12/29/14 15:35	1
Tetrachloroethene	ND		1.0	0.20	ug/L			12/29/14 15:35	1
Toluene	ND		1.0	0.22	ug/L			12/29/14 15:35	1
trans-1,4-Dichloro-2-butene	ND		1.0	0.31	ug/L			12/29/14 15:35	1
trans-1,2-Dichloroethene	ND		1.0	0.26	ug/L			12/29/14 15:35	1
trans-1,3-Dichloropropene	ND		1.0	0.56	ug/L			12/29/14 15:35	1

TestAmerica Canton

# QC Sample Results

Client: TRC Environmental Corp-Payne Firm  
Project/Site: EMD

TestAmerica Job ID: 240-45751-1

## Method: 8260B - Volatile Organic Compounds (GC/MS) (Continued)

**Lab Sample ID: MB 240-162734/6**

**Matrix: Water**

**Analysis Batch: 162734**

**Client Sample ID: Method Blank**

**Prep Type: Total/NA**

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,1,1-Trichloroethane	ND		1.0	0.22	ug/L			12/29/14 15:35	1
1,1,2-Trichloroethane	ND		1.0	0.17	ug/L			12/29/14 15:35	1
Trichloroethene	ND		1.0	0.15	ug/L			12/29/14 15:35	1
Trichlorofluoromethane	ND		1.0	0.49	ug/L			12/29/14 15:35	1
1,2,3-Trichloropropane	ND		1.0	0.30	ug/L			12/29/14 15:35	1
Vinyl acetate	ND		2.0	0.41	ug/L			12/29/14 15:35	1
Vinyl chloride	ND		1.0	0.29	ug/L			12/29/14 15:35	1
Xylenes, Total	ND		2.0	0.43	ug/L			12/29/14 15:35	1

Surrogate	MB %Recovery	MB Qualifier	Limits	Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	95		66 - 120		12/29/14 15:35	1
Dibromofluoromethane (Surr)	114		75 - 121		12/29/14 15:35	1
1,2-Dichloroethane-d4 (Surr)	110		63 - 129		12/29/14 15:35	1
Toluene-d8 (Surr)	99		74 - 120		12/29/14 15:35	1

**Lab Sample ID: LCS 240-162734/4**

**Matrix: Water**

**Analysis Batch: 162734**

**Client Sample ID: Lab Control Sample**

**Prep Type: Total/NA**

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Acetone	20.0	19.3		ug/L		96	43 - 136
Acrolein	50.0	31.1		ug/L		62	51 - 170
Acrylonitrile	100	87.1		ug/L		87	66 - 132
Benzene	10.0	11.1		ug/L		111	80 - 120
Bromodichloromethane	10.0	12.3	*	ug/L		123	72 - 121
Bromoform	10.0	9.81		ug/L		98	40 - 131
Bromomethane	10.0	10.6		ug/L		106	11 - 185
2-Butanone	20.0	16.8		ug/L		84	60 - 126
Carbon disulfide	10.0	11.1		ug/L		111	62 - 142
Carbon tetrachloride	10.0	12.7		ug/L		127	66 - 128
Chlorobenzene	10.0	11.0		ug/L		110	80 - 120
Chloroethane	10.0	9.61		ug/L		96	25 - 153
Chloroform	10.0	11.6		ug/L		116	79 - 120
Chloromethane	10.0	8.30		ug/L		83	44 - 126
3-Chloro-1-propene	10.0	9.83		ug/L		98	40 - 160
cis-1,2-Dichloroethene	10.0	11.6		ug/L		116	80 - 120
cis-1,3-Dichloropropene	10.0	12.1	*	ug/L		121	61 - 120
Dibromochloromethane	10.0	11.3		ug/L		113	64 - 120
1,2-Dibromo-3-Chloropropane	10.0	9.47		ug/L		95	42 - 136
Dibromomethane	10.0	11.1		ug/L		111	80 - 120
Dichlorodifluoromethane	10.0	5.72		ug/L		57	19 - 129
1,1-Dichloroethane	10.0	11.8		ug/L		118	80 - 120
1,2-Dichloroethane	10.0	11.6		ug/L		116	71 - 127
1,1-Dichloroethene	10.0	10.2		ug/L		102	78 - 131
1,2-Dichloroethene, Total	20.0	23.3		ug/L		117	80 - 120
1,2-Dichloropropane	10.0	10.4		ug/L		104	80 - 120
1,4-Dioxane	200	152		ug/L		76	50 - 150
Ethylbenzene	10.0	10.5		ug/L		105	80 - 120

TestAmerica Canton

# QC Sample Results

Client: TRC Environmental Corp-Payne Firm  
Project/Site: EMD

TestAmerica Job ID: 240-45751-1

## Method: 8260B - Volatile Organic Compounds (GC/MS) (Continued)

**Lab Sample ID: LCS 240-162734/4**

**Matrix: Water**

**Analysis Batch: 162734**

**Client Sample ID: Lab Control Sample**

**Prep Type: Total/NA**

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Ethylene Dibromide	10.0	9.59		ug/L		96	79 - 120
Ethyl methacrylate	10.0	10.6		ug/L		106	40 - 160
2-Hexanone	20.0	16.3		ug/L		81	55 - 133
Iodomethane	10.0	12.5		ug/L		125	72 - 141
Isobutanol	250	199		ug/L		80	40 - 160
Methylene Chloride	10.0	11.6		ug/L		116	66 - 131
4-Methyl-2-pentanone (MIBK)	20.0	17.9		ug/L		90	63 - 128
m-Xylene & p-Xylene	10.0	11.0		ug/L		110	80 - 120
o-Xylene	10.0	11.2		ug/L		112	80 - 120
Styrene	10.0	11.6		ug/L		116	79 - 120
1,1,1,2-Tetrachloroethane	10.0	12.0		ug/L		120	72 - 120
1,1,1,2,2-Tetrachloroethane	10.0	9.09		ug/L		91	68 - 120
Tetrachloroethene	10.0	10.2		ug/L		102	79 - 120
Toluene	10.0	10.5		ug/L		105	80 - 120
trans-1,4-Dichloro-2-butene	10.0	8.83		ug/L		88	10 - 199
trans-1,2-Dichloroethene	10.0	11.7		ug/L		117	80 - 120
trans-1,3-Dichloropropene	10.0	12.0		ug/L		120	58 - 120
1,1,1-Trichloroethane	10.0	12.5 *		ug/L		125	74 - 120
1,1,2-Trichloroethane	10.0	9.61		ug/L		96	80 - 120
Trichloroethene	10.0	11.3		ug/L		113	76 - 120
Trichlorofluoromethane	10.0	10.4		ug/L		104	49 - 157
1,2,3-Trichloropropane	10.0	9.14		ug/L		91	73 - 129
Vinyl acetate	10.0	7.33		ug/L		73	46 - 161
Vinyl chloride	10.0	8.44		ug/L		84	53 - 127
Xylenes, Total	20.0	22.2		ug/L		111	80 - 120

Surrogate	LCS LCS		Limits
	%Recovery	Qualifier	
4-Bromofluorobenzene (Surr)	108		66 - 120
Dibromofluoromethane (Surr)	117		75 - 121
1,2-Dichloroethane-d4 (Surr)	116		63 - 129
Toluene-d8 (Surr)	107		74 - 120

**Lab Sample ID: MB 240-162825/7**

**Matrix: Water**

**Analysis Batch: 162825**

**Client Sample ID: Method Blank**

**Prep Type: Total/NA**

Analyte	MB MB		RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
	Result	Qualifier							
Acetone	ND		10	3.4	ug/L			12/30/14 12:46	1
Acetonitrile	ND		20	9.2	ug/L			12/30/14 12:46	1
Acrolein	ND		20	1.4	ug/L			12/30/14 12:46	1
Acrylonitrile	ND		20	6.3	ug/L			12/30/14 12:46	1
Benzene	ND		1.0	0.24	ug/L			12/30/14 12:46	1
Bromodichloromethane	ND		1.0	0.15	ug/L			12/30/14 12:46	1
Bromoform	ND		1.0	0.56	ug/L			12/30/14 12:46	1
Bromomethane	ND		1.0	0.63	ug/L			12/30/14 12:46	1
2-Butanone	ND		10	4.1	ug/L			12/30/14 12:46	1
Carbon disulfide	ND		1.0	0.28	ug/L			12/30/14 12:46	1
Carbon tetrachloride	ND		1.0	0.17	ug/L			12/30/14 12:46	1

TestAmerica Canton

# QC Sample Results

Client: TRC Environmental Corp-Payne Firm  
Project/Site: EMD

TestAmerica Job ID: 240-45751-1

## Method: 8260B - Volatile Organic Compounds (GC/MS) (Continued)

Lab Sample ID: MB 240-162825/7

Matrix: Water

Analysis Batch: 162825

Client Sample ID: Method Blank

Prep Type: Total/NA

Analyte	MB	MB	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
	Result	Qualifier							
Chlorobenzene	ND		1.0	0.19	ug/L			12/30/14 12:46	1
Chloroethane	ND		1.0	0.33	ug/L			12/30/14 12:46	1
Chloroform	ND		1.0	0.21	ug/L			12/30/14 12:46	1
Chloromethane	ND		1.0	0.44	ug/L			12/30/14 12:46	1
Chloroprene	ND		2.0	0.26	ug/L			12/30/14 12:46	1
3-Chloro-1-propene	ND		2.0	0.84	ug/L			12/30/14 12:46	1
cis-1,2-Dichloroethene	ND		1.0	0.20	ug/L			12/30/14 12:46	1
cis-1,3-Dichloropropene	ND		1.0	0.46	ug/L			12/30/14 12:46	1
Dibromochloromethane	ND		1.0	0.43	ug/L			12/30/14 12:46	1
1,2-Dibromo-3-Chloropropane	ND		2.0	0.82	ug/L			12/30/14 12:46	1
Dibromomethane	ND		1.0	0.17	ug/L			12/30/14 12:46	1
Dichlorodifluoromethane	ND		1.0	0.50	ug/L			12/30/14 12:46	1
1,1-Dichloroethane	ND		1.0	0.26	ug/L			12/30/14 12:46	1
1,2-Dichloroethane	ND		1.0	0.20	ug/L			12/30/14 12:46	1
1,1-Dichloroethene	ND		1.0	0.45	ug/L			12/30/14 12:46	1
1,2-Dichloroethene, Total	ND		2.0	0.20	ug/L			12/30/14 12:46	1
1,2-Dichloropropane	ND		1.0	0.22	ug/L			12/30/14 12:46	1
1,4-Dioxane	ND		50	40	ug/L			12/30/14 12:46	1
Ethylbenzene	ND		1.0	0.23	ug/L			12/30/14 12:46	1
Ethylene Dibromide	ND		1.0	0.19	ug/L			12/30/14 12:46	1
Ethyl methacrylate	ND		1.0	0.44	ug/L			12/30/14 12:46	1
2-Hexanone	ND		10	3.9	ug/L			12/30/14 12:46	1
Iodomethane	ND		1.0	0.42	ug/L			12/30/14 12:46	1
Isobutanol	ND		50	12	ug/L			12/30/14 12:46	1
Methacrylonitrile	ND		2.0	0.70	ug/L			12/30/14 12:46	1
Methylene Chloride	ND		1.0	0.28	ug/L			12/30/14 12:46	1
Methyl methacrylate	ND		2.0	0.99	ug/L			12/30/14 12:46	1
4-Methyl-2-pentanone (MIBK)	ND		10	3.6	ug/L			12/30/14 12:46	1
Propionitrile	ND		4.0	0.95	ug/L			12/30/14 12:46	1
Styrene	ND		1.0	0.45	ug/L			12/30/14 12:46	1
1,1,1,2-Tetrachloroethane	ND		1.0	0.28	ug/L			12/30/14 12:46	1
1,1,2,2-Tetrachloroethane	ND		1.0	0.22	ug/L			12/30/14 12:46	1
Tetrachloroethene	ND		1.0	0.20	ug/L			12/30/14 12:46	1
Toluene	ND		1.0	0.22	ug/L			12/30/14 12:46	1
trans-1,4-Dichloro-2-butene	ND		1.0	0.31	ug/L			12/30/14 12:46	1
trans-1,2-Dichloroethene	ND		1.0	0.26	ug/L			12/30/14 12:46	1
trans-1,3-Dichloropropene	ND		1.0	0.56	ug/L			12/30/14 12:46	1
1,1,1-Trichloroethane	ND		1.0	0.22	ug/L			12/30/14 12:46	1
1,1,2-Trichloroethane	ND		1.0	0.17	ug/L			12/30/14 12:46	1
Trichloroethene	ND		1.0	0.15	ug/L			12/30/14 12:46	1
Trichlorofluoromethane	ND		1.0	0.49	ug/L			12/30/14 12:46	1
1,2,3-Trichloropropane	ND		1.0	0.30	ug/L			12/30/14 12:46	1
Vinyl acetate	ND		2.0	0.41	ug/L			12/30/14 12:46	1
Vinyl chloride	ND		1.0	0.29	ug/L			12/30/14 12:46	1
Xylenes, Total	ND		2.0	0.43	ug/L			12/30/14 12:46	1

Surrogate	MB	MB	Limits	Prepared	Analyzed	Dil Fac
	%Recovery	Qualifier				
4-Bromofluorobenzene (Surr)	89		66 - 120		12/30/14 12:46	1

TestAmerica Canton

# QC Sample Results

Client: TRC Environmental Corp-Payne Firm  
Project/Site: EMD

TestAmerica Job ID: 240-45751-1

## Method: 8260B - Volatile Organic Compounds (GC/MS) (Continued)

**Lab Sample ID: MB 240-162825/7**

**Matrix: Water**

**Analysis Batch: 162825**

**Client Sample ID: Method Blank**

**Prep Type: Total/NA**

Surrogate	MB MB		Limits	Prepared	Analyzed	Dil Fac
	%Recovery	Qualifier				
Dibromofluoromethane (Surr)	89		75 - 121		12/30/14 12:46	1
1,2-Dichloroethane-d4 (Surr)	99		63 - 129		12/30/14 12:46	1
Toluene-d8 (Surr)	94		74 - 120		12/30/14 12:46	1

**Lab Sample ID: LCS 240-162825/5**

**Matrix: Water**

**Analysis Batch: 162825**

**Client Sample ID: Lab Control Sample**

**Prep Type: Total/NA**

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec.
							Limits
Acetone	20.0	16.6		ug/L		83	43 - 136
Acrolein	50.0	40.5		ug/L		81	51 - 170
Acrylonitrile	100	110		ug/L		110	66 - 132
Benzene	10.0	9.83		ug/L		98	80 - 120
Bromodichloromethane	10.0	9.91		ug/L		99	72 - 121
Bromoform	10.0	9.36		ug/L		94	40 - 131
Bromomethane	10.0	2.67		ug/L		27	11 - 185
2-Butanone	20.0	20.9		ug/L		104	60 - 126
Carbon disulfide	10.0	8.43		ug/L		84	62 - 142
Carbon tetrachloride	10.0	10.0		ug/L		100	66 - 128
Chlorobenzene	10.0	9.99		ug/L		100	80 - 120
Chloroethane	10.0	2.93		ug/L		29	25 - 153
Chloroform	10.0	9.27		ug/L		93	79 - 120
Chloromethane	10.0	5.76		ug/L		58	44 - 126
3-Chloro-1-propene	10.0	8.42		ug/L		84	40 - 160
cis-1,2-Dichloroethene	10.0	9.40		ug/L		94	80 - 120
cis-1,3-Dichloropropene	10.0	10.9		ug/L		109	61 - 120
Dibromochloromethane	10.0	10.3		ug/L		103	64 - 120
1,2-Dibromo-3-Chloropropane	10.0	10.3		ug/L		103	42 - 136
Dibromomethane	10.0	10.2		ug/L		102	80 - 120
Dichlorodifluoromethane	10.0	6.13		ug/L		61	19 - 129
1,1-Dichloroethane	10.0	10.0		ug/L		100	80 - 120
1,2-Dichloroethane	10.0	10.5		ug/L		105	71 - 127
1,1-Dichloroethene	10.0	9.27		ug/L		93	78 - 131
1,2-Dichloroethene, Total	20.0	18.7		ug/L		94	80 - 120
1,2-Dichloropropane	10.0	10.6		ug/L		106	80 - 120
1,4-Dioxane	200	282		ug/L		141	50 - 150
Ethylbenzene	10.0	9.68		ug/L		97	80 - 120
Ethylene Dibromide	10.0	10.1		ug/L		101	79 - 120
Ethyl methacrylate	10.0	12.7		ug/L		127	40 - 160
2-Hexanone	20.0	23.4		ug/L		117	55 - 133
Iodomethane	10.0	8.09		ug/L		81	72 - 141
Isobutanol	250	321		ug/L		128	40 - 160
Methylene Chloride	10.0	7.75		ug/L		78	66 - 131
4-Methyl-2-pentanone (MIBK)	20.0	24.7		ug/L		124	63 - 128
m-Xylene & p-Xylene	10.0	9.85		ug/L		98	80 - 120
o-Xylene	10.0	9.50		ug/L		95	80 - 120
Styrene	10.0	10.1		ug/L		101	79 - 120
1,1,1,2-Tetrachloroethane	10.0	9.70		ug/L		97	72 - 120

TestAmerica Canton

# QC Sample Results

Client: TRC Environmental Corp-Payne Firm  
 Project/Site: EMD

TestAmerica Job ID: 240-45751-1

## Method: 8260B - Volatile Organic Compounds (GC/MS) (Continued)

Lab Sample ID: LCS 240-162825/5

Matrix: Water

Analysis Batch: 162825

Client Sample ID: Lab Control Sample

Prep Type: Total/NA

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
1,1,2,2-Tetrachloroethane	10.0	10.1		ug/L		101	68 - 120
Tetrachloroethene	10.0	9.95		ug/L		100	79 - 120
Toluene	10.0	10.1		ug/L		101	80 - 120
trans-1,4-Dichloro-2-butene	10.0	8.09		ug/L		81	10 - 199
trans-1,2-Dichloroethene	10.0	9.33		ug/L		93	80 - 120
trans-1,3-Dichloropropene	10.0	11.6		ug/L		116	58 - 120
1,1,1-Trichloroethane	10.0	8.85		ug/L		88	74 - 120
1,1,2-Trichloroethane	10.0	10.2		ug/L		102	80 - 120
Trichloroethene	10.0	10.3		ug/L		103	76 - 120
Trichlorofluoromethane	10.0	8.20		ug/L		82	49 - 157
1,2,3-Trichloropropane	10.0	10.4		ug/L		104	73 - 129
Vinyl acetate	10.0	9.05		ug/L		91	46 - 161
Vinyl chloride	10.0	7.02		ug/L		70	53 - 127
Xylenes, Total	20.0	19.4		ug/L		97	80 - 120

Surrogate	LCS LCS		Limits
	%Recovery	Qualifier	
4-Bromofluorobenzene (Surr)	90		66 - 120
Dibromofluoromethane (Surr)	91		75 - 121
1,2-Dichloroethane-d4 (Surr)	95		63 - 129
Toluene-d8 (Surr)	97		74 - 120

# QC Association Summary

Client: TRC Environmental Corp-Payne Firm  
Project/Site: EMD

TestAmerica Job ID: 240-45751-1

## GC/MS VOA

### Analysis Batch: 162734

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
240-45751-2	TB01/121814	Total/NA	Water	8260B	
LCS 240-162734/4	Lab Control Sample	Total/NA	Water	8260B	
MB 240-162734/6	Method Blank	Total/NA	Water	8260B	

### Analysis Batch: 162825

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
240-45751-1	EFFLUENT/121814	Total/NA	Water	8260B	
LCS 240-162825/5	Lab Control Sample	Total/NA	Water	8260B	
MB 240-162825/7	Method Blank	Total/NA	Water	8260B	

# Lab Chronicle

Client: TRC Environmental Corp-Payne Firm  
Project/Site: EMD

TestAmerica Job ID: 240-45751-1

**Client Sample ID: EFFLUENT/121814**

**Lab Sample ID: 240-45751-1**

Date Collected: 12/18/14 15:00

Matrix: Water

Date Received: 12/19/14 08:40

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260B		2.5	162825	12/30/14 13:09	RJQ	TAL CAN

**Client Sample ID: TB01/121814**

**Lab Sample ID: 240-45751-2**

Date Collected: 12/18/14 00:00

Matrix: Water

Date Received: 12/19/14 08:40

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260B		1	162734	12/29/14 20:48	RJQ	TAL CAN

**Laboratory References:**

TAL CAN = TestAmerica Canton, 4101 Shuffel Street NW, North Canton, OH 44720, TEL (330)497-9396

# Certification Summary

Client: TRC Environmental Corp-Payne Firm  
 Project/Site: EMD

TestAmerica Job ID: 240-45751-1

## Laboratory: TestAmerica Canton

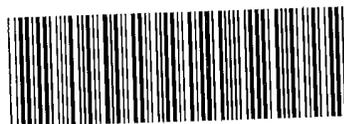
All certifications held by this laboratory are listed. Not all certifications are applicable to this report.

Authority	Program	EPA Region	Certification ID	Expiration Date
California	NELAP	9	01144CA	06-30-14 *
California	State Program	9	2927	04-30-15
Connecticut	State Program	1	PH-0590	12-31-14
Florida	NELAP	4	E87225	06-30-15
Georgia	State Program	4	N/A	06-30-15
Illinois	NELAP	5	200004	07-31-15
Kansas	NELAP	7	E-10336	01-31-15
Kentucky (UST)	State Program	4	58	06-30-15
L-A-B	DoD ELAP		L2315	07-18-16
Minnesota	NELAP	5	039-999-348	12-31-14
Nevada	State Program	9	OH-000482008A	07-31-15
New Jersey	NELAP	2	OH001	06-30-15
New York	NELAP	2	10975	03-31-15
Ohio VAP	State Program	5	CL0024	10-31-15
Pennsylvania	NELAP	3	68-00340	08-31-15
Texas	NELAP	6		08-31-15
USDA	Federal		P330-13-00319	11-26-16
Virginia	NELAP	3	460175	09-14-15
Washington	State Program	10	C971	01-12-15
West Virginia DEP	State Program	3	210	12-31-14
Wisconsin	State Program	5	999518190	08-31-15

\* Certification renewal pending - certification considered valid.



## CHAIN OF CUSTODY AND RECEIVING DOCUMENTS



240-45751 Chain of Custody

1.0

**Chain of Custody Record**  
North Canton, OH

TestAmerica Laboratory location:  DW  NPDES  RCRA  Other

<b>Client Contact</b> Company Name: TRC Environmental Address: 11231 Cornell Park Drive City/State/Zip: Cincinnati, OH 45242 Phone: (513) 489-2255 Project Name: EMO Project Number: 213083.0000 Phase 05 P.O.#		<b>Client Project Manager:</b> Name: Jim Wasserbauer Telephone: (513) 489-2255 Email: jwasserbauer@trcsolutions.com CC: ckyle@trcsolutions.com Method of Shipment/Carrier: I.A. Courier Shipping/Tracking No:		<b>Site Contact:</b> Name: Denis Taus Telephone:		<b>Lab Contact:</b> Name: Pat O'Meara Telephone:		<b>TestAmerica Laboratories, Inc.</b> COC No: 061998 Page 1 of 1 COCs	
<b>Sample Identification</b> Sample Date: 12/18/14 Sample Time: 1500 Sample Date: 12/18/14 Sample Time:		<b>Matrix:</b> Aqueous: <input checked="" type="checkbox"/> Sediment: <input type="checkbox"/> Solid: <input type="checkbox"/> Other:		<b>Containers &amp; Preservatives:</b> H2SO4: <input type="checkbox"/> HNO3: <input type="checkbox"/> HCl: <input type="checkbox"/> NaOH: <input type="checkbox"/> ZnAc: <input type="checkbox"/> Unpres: <input type="checkbox"/> Other:		<b>Analysis:</b> For lab use only: <input type="checkbox"/> Walk-in client: <input type="checkbox"/> Lab pickup: <input type="checkbox"/> Lab sampling: <input type="checkbox"/> Job/SDG No:		<b>Sample Specific Notes / Special Instructions:</b>	
Sample Disposal (A fee may be assessed if samples are retained longer than 1 month) <input type="checkbox"/> Return to Client <input checked="" type="checkbox"/> Disposal By Lab <input type="checkbox"/> Archive For _____ Months		<b>Relinquished by:</b> Signature: [Signature] Date/Time: 12/18/14 16:10 Company: TRC		<b>Received by:</b> Signature: [Signature] Date/Time: 12/18/14 16:10 Company: Test America		<b>Relinquished by:</b> Signature: [Signature] Date/Time: 12/18/14 16:10 Company: Test America		<b>Received by:</b> Signature: [Signature] Date/Time: 12/18/14 16:10 Company: Test America	

Cincinnati



210501

RCRA CA Level IV



TestAmerica Canton Sample Receipt Form/Narrative		Login #: <u>43751</u>
Canton Facility _____		
Client <u>TRC</u>	Site Name _____	Cooler unpacked by: <u>[Signature]</u>
Cooler Received on <u>12-19-14</u>	Opened on <u>12-19-14</u>	
FedEx: <input checked="" type="checkbox"/> <del>Grd</del> Exp    UPS    FAS    Stetson    Client Drop Off    TestAmerica Courier    Other _____		
Receipt After-hours: Drop-off Date/Time _____		Storage Location _____
TestAmerica Cooler # _____	Foam Box <input checked="" type="checkbox"/> <u>Client Cooler</u>	Box _____ Other _____
Packing material used: <u>Bubble Wrap</u> Foam    Plastic Bag    None    Other _____		
COOLANT: <u>Wet Ice</u> Blue Ice    Dry Ice    Water    None		
1. Cooler temperature upon receipt		
IR GUN# A (CF +4.0 °C)	Observed Cooler Temp. _____ °C	Corrected Cooler Temp. _____ °C
IR GUN# 4 (CF +1.2 °C)	Observed Cooler Temp. _____ °C	Corrected Cooler Temp. _____ °C
IR GUN# 5 (CF +0.4 °C)	Observed Cooler Temp. _____ °C	Corrected Cooler Temp. _____ °C
IR GUN# 8 (CF +0.7 °C)	Observed Cooler Temp. <u>1.7</u> °C	Corrected Cooler Temp. <u>1.7</u> °C
<input type="checkbox"/> See Multiple Cooler Form		
2. Were custody seals on the outside of the cooler(s)?    If Yes Quantity <u>1</u> <input checked="" type="checkbox"/> Yes    No		
-Were custody seals on the outside of the cooler(s) signed & dated? <input checked="" type="checkbox"/> Yes    No    NA		
-Were custody seals on the bottle(s)?    Yes <input checked="" type="checkbox"/> No		
3. Shippers' packing slip attached to the cooler(s)? <input checked="" type="checkbox"/> Yes    No		
4. Did custody papers accompany the sample(s)? <input checked="" type="checkbox"/> Yes    No		
5. Were the custody papers relinquished & signed in the appropriate place? <input checked="" type="checkbox"/> Yes    No		
6. Did all bottles arrive in good condition (Unbroken)? <input checked="" type="checkbox"/> Yes    No		
7. Could all bottle labels be reconciled with the COC? <input checked="" type="checkbox"/> Yes    No		
8. Were correct bottle(s) used for the test(s) indicated? <input checked="" type="checkbox"/> Yes    No		
9. Sufficient quantity received to perform indicated analyses? <input checked="" type="checkbox"/> Yes    No		
10. Were sample(s) at the correct pH upon receipt?    Yes    No <input checked="" type="checkbox"/> NA    pH Strip Lot# <u>HC425511</u>		
11. Were VOAs on the COC? <input checked="" type="checkbox"/> Yes    No		
12. Were air bubbles >6 mm in any VOA vials?    Yes <input checked="" type="checkbox"/> No    NA		
13. Was a trip blank present in the cooler(s)? <input checked="" type="checkbox"/> Yes    No		
Contacted PM _____ Date _____ by _____ via Verbal    Voice    Mail    Other		
Concerning _____		
14. CHAIN OF CUSTODY & SAMPLE DISCREPANCIES		Samples processed by: <u>[Signature]</u>
_____ _____ _____ _____ _____ _____ _____ _____		
15. SAMPLE CONDITION		
Sample(s) _____ were received after the recommended holding time had expired.		
Sample(s) _____ were received in a broken container.		
Sample(s) _____ were received with bubble >6 mm in diameter. (Notify PM)		
16. SAMPLE PRESERVATION		
Sample(s) _____ were further preserved in the laboratory.		
Time preserved: _____ Preservative(s) added/Lot number(s): _____		

Ref: SOP NC-SC-0005, Sample Receiving  
L:\QA\QC\QA Department\QA TARDIS\Document Control\Work Instructions\WI\_QA use only\WI-NC-099M-110614 Cooler Receipt Form.doc djl